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## **Abstract**

Disclosed is a method for making a bioreactor comprising a foreign target gene, special selectable markers and Dunaliella Salina as host. It is prepared by the genetic transformation techniques that include introducing a foreign target gene into the cells of Dunaliella Salina and screening the transformed cells of Dunaliella Salina. The bioreactor of the present invention can be used as a safe and cheap production system for proteins of pharmaceutical interest including vaccines, especially oral products, in a large scale, because the cells of Dunaliella Salina are easy of genetic manipulation in preparation of the bioreactor, nontoxic and edible for humans and animals, and harmless to the environment.